OPERATION PLAN
AUGUST 27, 2007
DAVID H. FELL AND CO., INC.
EPA ID # CAL 000 110 141

TABLE OF CONTENTS

		PAGE #
SECTION I	FACILITY IDENTIFICATION/LOCATION	3
SECTION II	FACILITY OPERATION AND HAZARDOUS WASTE-MANAGEMENT PRACTICE	5
SECTION III	WASTE ANALYSIS PLAN	7
SECTION IV	FACILITY DESIGN (STORAGE)	13
SECTION V	FACILITY DESIGN (TREATMENT)	16
SECTION VI	TRAINING PLAN	28
SECTION VII	INSPECTION PLAN	30
SECTION VIII	CONTINGENCY PLAN	32
SECTION IX	CLOSURE PLAN	36
SECTION X	CERTIFICATIONS	44

TABLE OF ATTACHMENTS

AA-1	CLOSURE COST ESTIMATE-CALTECH EMVIRONMENTAL
AA-2	REVISED CLOSURE COST ESTIMATE
AA-3	PERSONNEL TRAINING/ALTERNATIVE COORDINATOR
AA-4	SCALED FACILITY PLOT PLAN
AA-5	PROCESS FLOW DIAGRAM
AA-6	INSPECTION FORMS
AA-7	OWNERS CERTIFICATE
AA-8	1093A FORMS (baghouse # 1 and #2, coolant #7 A, #7B)
AA-9	ENVIRONMENTAL INFORMATION FORM
AA-10	P E. CERTIFICATE-FOR STORAGE CONTAINMENTS, S-6, S-9, EVAPORATOR
AA 11-	EQUIPMENT MANUALS
AA-12	WASTE ANALYSIS PLAN
AA-13	SCAQMD-PERMITS
AA-14	CONTINGENCY PLAN

SECTION I FACILITY IDENTIFICATION /LOCATION

A. FACILITY NAME: David H. Fell & Co., Inc.
EPA ID #: CAL 000 110 141
Address: 6009 Bandini Blvd. Bell, CA,
Los Angeles County, 90040
Telephone: 323-722-9992
Fax #: 323-722-6567

FACILITY LAND USE
The land use designation for the facility is Manufacturing "M". The surrounding land uses are:
To the north, 6001 Bandini Blvd, a trucking company,
To the south, 5860 Bandini Blvd., Golden Ginger Product, company,
To the east, 6015 Bandini Blvd, garment manufacturing,
To the west, 6005 Bandini Blvd. a label manufacturing company.
The nearest school to the facility is the Rosemead Park Elementary School, approximately one mile from the subject site. The Grace Lutheran Church is located approximately one mile from the subject site. George James Bell, an historical building is located approximately five miles from the subject site. The Los Angeles Community Hospital is located approximately 2.31 miles from the subject site. The closest residential building to the subject site is approximately one mile.

ENVIRONMENTAL DATA
The subject site is located north of Bandini Blvd. between Eastern Avenue and Scott Way in the City of Bell. The site lies in the Downey Plain within the Central Basin Pressure Area, approximately one mile northeast of the Los Angeles River and the Long Beach (710) Freeway. The depth to groundwater is 138.5 feet and distance to the nearest surface water (Los Angeles River) approximately one mile form the site.

This operation plan is for the renewal of the existing Standardized Permit.

B. NAME OF THE PERSON RESPONSIBLE FOR THE PREPARATION OF THE OPERATION PLAN:
Max Rafii, Health, Safety & Environmental Affairs Manager, REA II
Phone: 323-722-9992
Fax: 323-722-6567
E-Mail: Max@dhfco.com

C: OWNER/OPERATOR AND CERTIFICATION
See attachment (AA-7)

D FACILITY LOCATION MAP AND SITE LAYOUT DIAGRAM

The subject site is located north of Bandini Boulevard between Eastern Avenue and Scott Way in the City of Bell, California. The site is located approximately one mile northeast of the Long Beach Freeway (710). The Santa Ana Freeway (5) is located 0.7 miles northeast of the subject site. The property is approximately 60,750 square feet in size and is occupied by a masonry warehouse structure. David H. Fell & Co., Inc. currently uses the structure for fabrication and processing of precious metals including the melting operations. The surrounding area in the vicinity of the site is predominantly occupied by warehouse structures used for commercial, warehousing and light manufacturing. Bandini Boulevard borders the site to the south, parking areas boarder the site to the north and to east. A commercial structure boarders the site to the west. Refer to facility plot plan and the map - ATTACHMENT AA- 4.

E LEGAL DESCRIPTION OF PROPERTY

According to records at the Department of Building and Safety the site is located in the City of Bell, County of Los Angeles, State of California and described as Lots 96-105 of Rancho Laguna Tract Parcel 10, per Parcel Map 24-52. However, due to USPS route designation, the subject site is using a mailing address in the City of Commerce and maintains a Post Office Box with an address in Los Angeles. The Latitude is 34 degrees, 59', 7" and The Longitude is 118 degrees, 9', 15". The Assessor's Parcel # is 6332-005-010.

F CONFIDENTIALITY REQUESTS AND JUSTIFICATION

None

SECTION II FACILITY OPERATION AND HAZARDOUS WASTE

MANAGEMENT PRACTICE:

David H Fell and Company, Inc (DHF) transfers hazardous waste containing silver and other precious metals from known off-site generators to the facility under manifests or under bill of lading when qualifying under small quantity exemption. The hazardous waste is analyzed in the DHF laboratory to determine its precious metals contents. The incoming waste is processed to maximize the reclamation of precious metals in the physical form requested by customers. The DHF treatment and storage units are located in an enclosed building as shown in the facility plot plan.

The treatment room is located on the west side of the facility divided into a melting room on the north and powder-processing room on the south end as identified in the facility plot plan. The process flow diagram describes the treatment processes used to refine and smelt the incoming waste in the melting room into precious metals ingots and beads and the treatment process used to produce the precious metals powder in the powder processing room. The melting room, where the refining and smelting process are conducted, contains gas furnaces and induction furnaces, which are identified on attachment AA-4, the facility plot plan. The furnaces produce precious metals ingots and slag. Gases and particulates from the furnaces and powder processing units are ducted to two air pollution control units (baghouses), located outside in the backyard, in the northwest corner of the facility, as shown on the facility plot plan. In the powder processing room, the incoming waste and slag from the furnaces are processed through mechanical size reduction equipment. An evaporator unit located outside in the backyard of the facility near the northeast corner evaporates hazardous waste (wash water) generated in the melting room and fabrication room, returns the solid left in the evaporator to the treatment process. All storage areas are identified on the plot plan.

NARRATIVE:

DHF receives the hazardous waste such as (jewelry sweeps containing silver) in the shipping area via truck (south side of the building). The shipping personnel receive the material, examine it for the content, assign a DHF job number, establish the total weight, log it on the log book and store it in the Hazardous Waste Storage Area (S-3), If it is liquid, then is stored in Storage Area S-9, located in the west side of the building. Based on the decision of the production manager and the availability of the equipment, the material will go thru the required equipment and the applicable processes such as:

Roaster furnace	drying, thermal reduction
Jaw Crusher	crushing
Ball Mill	grinding
Screen	screening
Blender	blending
Drum thief	sampling extraction
Melting furnace	melting

Based on the size of the lot, the production manager decides which of the following furnaces the material will be melted in:

induction furnaces # 15 - # 18 A and natural gas furnaces # 19 - # 23

During the melting process one or more of the following chemicals is added to the melt as applicable:
borax, boric acid, sodium nitrate, soda ash, copper oxide

The molten material is poured into the mold and cooled in coolants # 7A or # 7B, located in the melting area . It is in this stage of the process that the slag is formed on the top of the mold, which is removed at a later time, and stored in a drum and labeled as hazardous waste per the requirement of California Code of Regulations, title 22 (CCR)

After the molds are cooled, the metal bars are removed and stored in metal drums and/or the safe for shipment to an off-site facility The slag is moved to the powder processing area and pulverized, screened, blended, and sampled

The purpose of coolant7-B is to cool down the metal bars, then the bars are stored in the proper drums and moved to the Powder Processing Area. The purpose of 7-A coolant is to cool down materials coming out of the Roaster Furnace

SECTION III WASTE ANALYSIS PLAN

The general purpose of DHF waste analysis plan is to characterize each waste stream to ensure that the facility is authorized to mange the waste generated or received The DHF plan is based on the requirement of applicable CCR, Title 22, and Section 66264 13 regulations.

A DESCRIPTION OF WASTE STREAM TYPES

TABLE I WASTE STREAMS

	Waste Stream	Code(s)	Hazard	Constituents	Process	Specific Gravity	Vapor Pressure	Flame point	pH	Color
A	Sweeps	D008, D011, 172, 591	toxic	Silver, lead	powder/melt	na	na	na	na	multi color
B	Wastewater	D011, 491	toxic	silver	evaporator/powder	1.1	na	na	7	white
C	Baghouse waste	D008, D011, 172, 591	toxic	silver/copper, lead	powder	na	na	na	na	dark brown
D	Mixed acid	D011, D002, 792	corrosive	Silver, < 2 pH	ship off site*	1.2	na	na	1.0	yellow
E	Cupel	D008, 181	toxic	lead	ship off site*	na	na	na	na	dark
F	Crucible	D008, 181	toxic	lead	ship off site*	na	na	na	na	dark
G	Sink sludge	D011, 171	toxic	silver	powder/melt	na	na	na	7.0	white
H	Filters	D011, 172	toxic	silver	powder/melt	na	na	na	na	dark
I	Slag	D008, D011, 172	toxic	Silver, lead	powder/melt	na	na	na	na	black
J	Silver chip	D011, 172	toxic	silver	Melt	na	na	na	na	Blaxk/gray

na = not applicable

*material generated in on site lab and shipped to California approved off site recycling/disposal facilities under manifest

The mixed acid waste is generated from the on-site lab from the fire assay to find precious metals content. Waste Stream G Sink sludge may contain residual water.

B PRE-ACCEPTANCE CRITERIA

The majority of the waste that DHF accepts is solid precious metal containing waste. Occasionally, DHF will receive a drum of liquid hazardous waste containing silver/gold mixed with water This is the only liquid hazardous waste that DHF will accept The pH of this waste is tested to ensure that the pH is between 6-7. DHF does not accept alkaline or acidic waste.

TABLE II PRE- ACCEPTANCE CRITERIA FOR INCOMING HAZARDOUS WASTE

WASTE STREAM	CODE	OBSERVATION	RESULTS
Jewelry Sweeps	D008, D011, 172, 591	check for color, texture, contents, odor, packaging, label, customer profile	Conforms to generator's Profile
Sink Sludge	D011, 171	Color, texture, packaging, odor, label	Conforms to generator's Profile

WASTE STREAM	CODE	OBSERVATION	RESULTS
Filters	D011, 172	check for color, texture, contents, odor, packaging, label, customer profile	Conforms to generator's Profile
Slag	D008, D011, 172	check for color, texture, contents, odor, packaging, label, customer profile	Conforms to generator's Profile
Silver Chip	D011, 172	color, texture, packaging, label	Conforms to generator's Profile

C. INSPECTION AND FINGERPRINTING

For each incoming shipment, the DHF will track the movement of the wastes and finger printing results Each incoming shipment is given a special number by DHF and that number is used to track that shipment as it is processed

1. Inspection: DHF has procedures to inspect each shipment when waste arrives The personnel of the shipping and receiving department are trained to inspect the incoming wastes. The inspection is to determine whether the waste matches the identity of the waste specified on the accompanying manifest or shipping paper
2. Fingerprinting:
   The following standards will be used to judge the analyzed fingerprint samples. We will record the description if available No other recording are required

TABLE III. FINGER PRINTING CRITERIA FOR INCOMING HAZARDOUS WASTE

WASTE STREAM	CODE	OBSERVATION	RESULTS
Jewelry Sweeps	D008, D011, 172, 591	check for color, texture, contents, odor, packaging, label, customer profile	Conforms to generator's Profile
Sink Sludge	D011, 171	Color, texture, packaging, odor, label	Conforms to generator's Profile
Filters	D011, 172	check for color, texture, contents, odor, packaging, label, customer profile	Conforms to generator's Profile
Slag	D008, D011, 172	check for color, texture, contents, odor, packaging, label, customer profile	Conforms to generator's Profile
Silver Chip	D011, 172	color, texture, packaging, label	Conforms to generator's Profile

Because DHF accepts almost solely solid waste, the pre-acceptance criteria and fingerprinting criteria are identical. The only liquid hazardous waste that DHF accepts is gold/silver mixed with water

The pH of this waste must be between 6-7 to be accepted by the facility.

If the below standards are not met, DHF will not accept the material.

- If the material has a strong odor.
- The solid waste should not contain any free liquid unless it is a shipment of gold/silver mixed with water.
- If the material is not the proper color (based on the generator's profile, if exist).
- The waste must be in Department of Transportation (DOT) approved containers, labeled and properly sealed.
- The material must accompany proper documentations.

If needed and required, and if dhf recognized that there has been a change in the profile of the lot received from the customer, dhf will take the sample from the incoming lot, and have it analyzed by the on Site laboratory to determine if there are hazardous components in the lot.

3 Outgoing Waste Shipment: To ensure the outgoing shipment can be accepted by designated treatment, storage, or disposal facilities, and to ensure the completion of the treatment at the facility, DHF shall test the outgoing shipment or end-point material. If required and applicable, the on Site laboratory personnel will take samples for verifications and analysis using instrumental methods of analysis (X-ray, ICP). The production manager, shipping and receiving personnel, environmental manager are trained to visually inspect the outgoing shipments for compliance with CCR 22 Regulations They make sure that the Health and Safety of the people and the Environment are protected The metals, Au, Ag, Pt, Pd, Rh, Cu, Fe, Zn, As, Sb, Pb, Sn, Te, Br, can be identified by using X-ray and ICP techniques, however, these metals are not always present in the lots processed by dhf.

Note: The production manager, shipping and receiving personnel, health, safety and environmental affairs manager are trained to ensure that all material that are accepted in the facility for processing are also visually inspected for the safety of the personnel and the environment The Regulation and requirement of CCR 22 will be followed in this aspect The health, safety and environmental affairs manager at the site, ensures that the generator's waste profile are up-dated and verified annually. If needed, the generators are required to submit new waste profile data, when DHF is notified or has reason to believe that the generator's process or operations have changed

SUMMARY OF THE PLAN: Material Generated On-Site

1 Types of waste generated at the facility:

a. Precious metal bearing acid
b. Fire assay cupels
c. Fire assay crucible

2. Information that must be known to transfer, treat, and store the waste:
   a. Solid or liquid
   b. ph
   c. Precious metal content
   d. Base metal content

3. Analysis performed by generator
   a. Visual inspection to determine whether material is solid or liquid
   b. Other analysis is performed by the treatment/recycling facility as needed

4. Analysis performed by treatment/recycling facility
   a. pH test
   b. Precious metal analysis
   c. Base metal analysis

5. Parameters analyzed and rationale for this selection:
   a. Solid vs. liquid- Determine proper storage and transportation requirements.
   b. pH- Determine treatment methods
   c. Precious metal content- Determine treatment methods
   d. Base metal content- Determine treatment methods.

6. Test methods
   a. Solid Vs Liquid: visual inspection
   b. pH paper or instrumentation
   c. Precious metal content: ICP, AA, XRF, fire assay

Note: If there is a dispute over the metal content of the incoming shipment, the on site laboratory personnel, will send sample to be analyzed to a California accredited laboratory Normally, the on site laboratory, samples all materials to be processed at the facility and analyzes them on site. This is done in order to settle the charges with our customers If the material/shipment fails pre-acceptance criteria, the owner of the material will be immediately informed. In most cases, the material will be returned to them.

DHF laboratory personnel are trained professionals, using applicable and approved methods for sampling and fingerprint analysis The uses of X-Ray Fluorescence, ICP, AA, and Fire Assay are practiced in the on site laboratory in order to determine the types of metals in the incoming shipment

7. Sampling Methods
   a. Burnable materials
      i Thermally reduce the material in an approved industrial roasting furnace.
      ii Grind in a ball or rod mill

iii Screen
iv Blend
v Sample using "pipe sampler" (drum thief)

b Grindable materials
i Crush if necessary in jaw and disk crusher
ii Grind in a ball or rod mill
iii Screen
iv Blend
v Sample using "pipe sampler"

c Meltable material
i Melt in approved industrial melting furnace
ii Sample using evacuated glass tube sampler during melt or drill bar after solidification

8 Identity
Should any material need to be analyzed for purposes of further identifying it, the sample taken by the methods described above will be sent to an outside lab specializing in such matters

9 Records
A record of the result of precious metal content tests described above is kept in the lab. The record will show:
a The job number
b The precious metal content

MATERIAL RECEIVED FROM OFF-SITE:

1 Types of waste received at the facility:
a Precious metal bearing metal dust
b Precious metal bearing metal sludge

2 Information that must be known to transfer, treat, and store the waste:
a Solid or liquid
b Burnable, grindable or directly meltable
c Precious metal content

3 Analysis performed by generator
The majority of the generators sending material to us do not perform a profile analysis prior to shipment They call their material jewelry polishing or sweeps, filters containing polishing dust or silver flake or powder and rely on information generated over decades of processing to define its contents.
Upon receipt of material from an off-site source we assume that the analysis or description supplied to us from the generator is correct. Prior to initial treatment of the material, we visually inspect the material to confirm this or if needed we run an analysis at our lab

4 Parameter analyzed for and rationale for this selection
a Solid Vs Liquid – We process only solid and sludge

b burnable Vs Grindable Vs Meltable – Determine the first treatment method.

c. Precious Metal Content – Determine storage location and destination of recyclable material generated from the waste

5. Test methods

a. Solid Vs Liquid: visual inspection

b. Burn Vs Grind Vs Melt: Visual inspection

c. Precious Metal content:

i Fire assay as described in "A textbook of fire assaying by Edward E Bugbee " Some material requires slight modifications, which are proprietary

ii Instrumental methods such as AA, ICP, XRF

6. Sampling Methods (the following will be performed if is needed).

a-The manifest number
b-lot number
c-ph (if applicable), will be done by on site laboratory, and shipping/receiving personnel

7. Identity

Should any material need to be analyzed for purposes of further identifying it, the sample will be sent to a California approved outside laboratory specializing in such matters.

SECTION IV FACILITY DESIGN: STORAGE (attachment AA-4)

There are nine Hazardous Waste Storage Areas (HWS) in the facility, used for the storage of solid and liquid wastes The following will be implemented by DHF:

A On each unit, a log sheet is provided to record the activity of that unit.

B All waste is stored in DOT (Department of Transportation) approved containers.

C The facility will not stack containers more than two high in any of the HWS's.

D All hazardous waste storage areas are located inside of the facility

E When necessary the liquid waste in the containment area, can be pumped out to a D O T approved drum, and disposed of by a California approved disposal facility Please note that DHF will not store incompatible wastes together. Each waste stream is stored in separate storage area as follows:
S-6, S-9 for liquid waste (Compatible Wastes)
S-1, S-2, S-3, S-4, S-5, S-7 (Vault), S-8, for all other compatible wastes.

F All hazardous waste shipped off-site is under a Bill of Lading, or when applicable a manifest The Health, Safety and Environmental Affairs Manager and the shipping/receiving department personnel, ensure that the incompatible wastes are separated by checking documentation and visual observation of the hazardous waste.

G All dry storage areas are inspected once a week. Daily inspections are made for tanks storage areas. Looking for leaking and deterioration, corrosion, DHF makes sure that storage devices holding hazardous waste are always closed during transfer and storage, except when it is necessary to add or remove waste.

H A minimum amount of aisle space (30") between rows of storage devices must be maintained

I Incompatible wastes, or incompatible wastes and materials, must not be placed in the same storage areas

J A storage area holding a hazardous waste that is incompatible with any waste or other material transferred or stored nearby in containers or tanks shall be separated from the other material or protected from them by safe and appropriate means

Following are the locations and descriptions of the Storage Areas at DHF:

TABLE IV STORAGE AREAS FOR HAZARDOUS WASTES

Storage Area	Location	Use	Capacity
S-1	powder processing area, west wall	solid hazardous waste, including jewelry sweeps, slag, etc. The waste is from any of the designated areas Includes waste codes D011, 172, D008, 171, 591	16.0'X 10.0' with the capacity of 21 containers of any size, totaling 1159, total equivalent gallons (T.E.G). Specific gravity of jewelry sweeps differs for each lot, from each customer, we cannot specify a value for it.
S-2	melt room area, east wall	solid hazardous waste, including jewelry sweeps, slag, etc The waste is from any of the designated areas Includes waste codes D011, 172, 171, 591, D008	17.0' X 20.0', with the capacity of 40 containers of any size, totaling 2200 T.E.G.
S-3	in the area close to the floor scale - metal shed, west wall by the roll-up door	solid hazardous waste, including jewelry sweeps, slag, etc The waste is from any of the designated areas Includes waste codes D011, 172, D008, 591	17.0' X 3 5', with the capacity of 10 containers of any size, totaling 550 T.E.G.
S-4	close to the east wall in the area of the floor scale.	solid hazardous waste, including excluded recyclable material, slag, jewelry sweeps and powder. The waste is from any of the designated areas. Includes waste codes D011, 172, 171, D008, 591	21.0' X 18 0', with the capacity of 80 containers of any size, totaling 4400 T.E.G.
S-5	the powder processing room, south wall.	solid hazardous waste, including slag, jewelry sweep, evaporator waste, baghouses waste, and other solid hazardous waste, containing precious metals The waste is from any of the designated areas Includes waste codes D011, 171, 172, 591, D008	6.5' X 6.0', with, the capacity of 10 containers of any size totaling 550 T.E.G.
S-6	Fabrication Room # 2, west wall.	The liquid, mixed acid waste (hydrochloric and nitric), containing silver, generated from the activities of the site laboratory and virgin acids are stored in this area Includes waste code D011, D002, 172, 792	5 0' X 5.0' and has secondary containments per CCR22 Regulations. This unit has the capacity of 133 gallons of any size containers The containment of the Area, is made of plastic and can holds 110 % of the largest container stored, per requirement of the CCR Title 22.

S-7	opposite Fabrication Room #2, center of the building.	solid hazardous waste including, jewelry sweeps, excluded recyclable material, slag, laboratory samples This waste is from any other designated areas. Includes waste codes D011, 172, 171, D008, 591	16.0' X 12.0', with the capacity of 1100 T E.G. of any size containers.
S-8	Fabrication Room # 2, west wall	solid hazardous waste - cupel, crucible containing lead that is generated from the laboratory activities. Includes waste codes D008, 181.	12.0' X 7.0', with the capacity of 330 T E G. of any size containers.
S-9	Powder Processing Area, west wall), close to the exit to the back parking lot.	liquid hazardous waste containing precious metals. Includes waste codes D011, 172, 171.	5.0' X 5 0' and has secondary containments per CCR22 Regulations. This unit has the capacity of 115 gallons of any size containers. The containment is made of plastic and can hold 110 % of the largest container stored, per requirement of CCR, Title 22.

Please note that, the vapor pressure, flame point/auto ignition temperature is not applicable in the waste streams mentioned above. The specific gravity for jewelry sweeps is different for each customer, depending the components included in the lot, the pH of the mixed acid waste is less than 2.0. The color of the jewelry sweeps is normally gray, the color of mixed acid is yellowish, the color of slag is black, and the color of the cupels and crucibles are light to black.

Coolant 7A is located in the melt room and 7B is located in the powder processing room, are used for cooling of bars and other materials, containing precious metals Coolants 7A and 7B take sweeps, sink sludge, baghouse dust, sludge, filters with waste codes D008, D011, 171, 172 and 591. Coolant 7A additionally takes slag These metal bars are stored in the S-7 vault or other designated Storage Areas (S-2, S-4), and/or are stored in the facility as needed.

The total capacity of Coolant 7-A and 7-B is 550 T.E G each.

SECTION V FACILITY DESIGN: TREATMENT (attachment AA-5)
And (attachment AA-4)
TABLE V PROCESS EQUIPMENT-WASTE STREAM

Unit #	Description	Waste Stream Processed
1	ball mill	sweep, baghouse dust, sludge, filters, slag, (D008, D011, 171, 172, 591)
2	screen	sweep, baghouse dust, wastewater, sludge, filters, slag, (D011, 171, 172, 591, D008)
3	screen	sweep, baghouse dust, wastewater, sink sludge, filters, slag, (D011, 171, 172, 591, D008)
4	ball mill	sweep, baghouse dust, sink sludge, filters, slag, (D011, 171, 172, 591, D008)
5	screen	sweep, baghouse dust, wastewater, sink sludge, filters, slag, (D011, 171, 172, 591, D008)
6	v blender	sweep, wastewater, baghouse dust, sink sludge, filters, slag, (D011, 171, 172, 591, D008)
7	blender	sweep, wastewater, baghouse dust, sink sludge, filters, slag, (D008, D011, 171, 172, 591)
8	rod mill	sweep, baghouse dust, sink sludge, filters, slag, (D011, 171, 172, 591, D008)
9	rod mill	sweep, baghouse dust, sink sludge, filters, slag, (D011, 171, 172, 591, D008)
10	pulverizer	Not operational
11	Jaw crusher	Not operational
12	ball mill	sweep, baghouse dust, sink sludge, filters, slag, (D011, 171, 172, 591, D008)
13	jaw crusher	sweeps, slag (D011, 172, 591, D008)
14	roaster furnace	sweep, sink sludge, baghouse dust, sludge, filters, (D011, 171, 172, 591, D008)
15	induction furnace	sweep, sink sludge, filters, slag, silver chip (D011, 171, 172, 591, D008)
16	induction furnace	sweep, sink sludge, filters, slag, silver chip (D011, 171, 172, 591, D008)
17	induction furnace	sweep, sink sludge, filters, slag, silver chip (D011, 171, 172, 591, D008)
18	induction furnace	sweep, sink sludge, filters, slag, silver chip (D011, 171, 172, 591, D008)
18A	induction furnace	sweep, sink sludge, filters, slag, silver chip (D011, 171, 172, 591, D008)
19	gas furnace	sweep, sink sludge, filters, slag, silver chip (D011, 171, 172, 591, D008)
20	gas furnace	sweep, sink sludge, filters, slag, silver chip (D011, 171, 172, 591, D008)
21	gas furnace	sweep, sink sludge, filters, slag, silver chip (D011, 171, 172, 591, D008)
22	gas furnace	sweep, sink sludge, filters, slag, silver chip (D011, 171, 172, 591, D008)
23	gas furnace	sweep, sink sludge, filters, slag, silver chip (D011, 171, 172, 591, D008)

Unit #	Description	Waste Stream Processed
BH1	baghouse	Emissions from all powder and Melt room equipment goes to the units , via ducting (D011, 172, 591, D008)
BH2	baghouse	Emissions from all powder and Melt room equipment goes to the units , via ducting (D011, 172, 591, D008, 591)
evaporator	evaporator	Cooling water and wash water from melt Room and fabrication Room goes to the unit (D011, 171, 491, D008)

Unit #1 BALL MILL (D008, D011, 171, 172, 591)
This unit is located in the powder processing area. Hazardous waste from any of the designated streams either as received, following the roaster furnace, or the jaw crusher is placed in the ball mill by hand scooping/shoveling and sealed. The mill vibrates causing steel balls to grind the material to a fine powder. The mill empties into the screen. The screen separates the + and –60 mesh material. The fines fall into a sealed drum. The oversize is swept out.

PROCESS CAPACITY:
170 pounds/batch
3 hrs/d, 5d/wk, 52 wk/yr (average)
10hrs/d, 5d/wk, 52 wk, yr (maximum)
1-2 hours/batch
Loading 10 minute
Unloading 10 minutes
Maximum capacity per month, approximately 18700 Pounds

Unit #2 SCREEN (D011, 171, 172, 591, D008)
This unit is located in the powder processing area. Hazardous waste from any of the designated streams either as received, following the roaster furnace, jaw crusher, ball mill or Rod mill is placed in the screen by hand scooping/shoveling or is directly input from ball mill. Material greater and smaller than 60 mesh are separated by vibrating the screen. The fines fall directly into a sealed drum. The oversize is swept out.

PROCESS CAPACITY:
100 pounds/batch
30-60 minutes
3 hrs d, 5d/wk, 52 wks/yr (average)
10 hrs/d, 5d/wk, 52 wks/yr (maximum)
Loading – 10 minutes
Unloading – 10 minutes
Maximum capacity per month, approximately 10500 00 pounds

Unit #3 SCREEN (D011, 171, 172, 591, D008)
This unit is located in the powder processing room. Hazardous waste from any of the designated streams either as received following the roaster furnace, jaw crusher, ball mill or rod mill is placed in the screen hand scooping/shoveling or is directly input from ball

mill Material greater and smaller than 60 mesh are separated by vibrating the screen. The fines fall directly into a sealed drum. The oversize is swept out

PROCESS DESIGN CAPACITY:
100 pounds/batch
30 – 60 minute/batch
3 hrs/d, 5 d/wk, 52 wks/yr (average)
10 hrs/d, 5d/wk, 52 wks/yr (maximum)
Loading – 10 minutes
Unloading 10 minutes
Maximum capacity per month approximately, 21000 00 pounds

Unit #4 BALL MILL (D011, 171, 172, 591, D008)
This unit is located in the powder processing area. Hazardous waste from any of the designated streams either as received, following the roaster furnace or jaw crusher is placed in the ball mill by hand scooping/shoveling and sealed. The mill vibrates causing steel balls to grind the material to a fine powder. The mill empties into the screen. The screen separates the + and –60 mesh material The fines fall into a sealed drum. The oversize is swept out.

PROCESS CAPACITY:
170 pounds/batch
30 – 60 minutes/batch
3 hrs/d, 5 d/wk, 52 wks/yr (average)
10 hrs/d, 5d/wk, 52 wks/yr (maximum)
Loading – 10 minutes
Unloading 10 minutes
Maximum capacity per month, approximately 10500.00 pounds

Unit #5 SCREEN (D011, 171, 172, 591, D008)
This unit is located in the powder processing area. Hazardous waste from any of the designated streams either as received, following the roaster furnace, jaw crusher, ball mill or rod mill is placed on the screen by hand scooping/shoveling. The screen vibrates separating + and –60 mesh powder. Powder passing through the screen goes directly into a sealed drum. The oversize is swept out.

PROCESS CAPACITY:
120 pounds/batch
30 – 60 minutes per batch
3 hrs/d, 5d/wk, 52 wks/yr (average)
10 hrs/d, 5 d/wk, 52 wks/yr
Loading – 10 minutes
Unloading –10 minutes
Maximum capacity per month, approximately10500.00 pounds

Unit #6 V- BLENDER (D011, 171, 172, 591, D008)
This unit is located in the powder processing area Hazardous waste from any of the designated streams, following other powder processing activities and passing through a 60-mesh screen is placed in the blender by hand scooping/shoveling. The machine is sealed and started rotating. Material is then emptied into a drum, sampled and sealed.

PROCESS CAPACITY:
500 pounds/batch
30-60 minutes per batch
3 hrs d, 5d/wk, 52 wks /yr (average)
10 hrs day, 5 d/week, 52 wks/yr (maximum)
Loading 10 minutes
Unloading 10 minutes
Maximum capacity per month, approximately 33600.00 pounds

Unit #7 BLENDER (D008, D011, 171, 172, 591)
This unit is located in the powder processing area Small lots of hazardous waste from any of the designated streams, following other powder processing activities and passing through a 60-mesh screen falls into a small drum The drum is sealed and placed in the blender. The drum rotates, mixing the material and is then removed by hand.

PROCESS CAPACITY:
50 pounds /batch
30- 60 minutes /batch
3 hrs d, 5 d/wk, 52 wks/yr (average)
10 hrs/d, 5 d/wk, 52 wks/yr (maximum)
Loading 10 minutes
Unloading 10 minutes
Maximum capacity per month, approximately 10500 00 pounds

Unit #8 ROD-MILL (D011, 171, 172, 591, D008)

This unit is located in the powder processing area. Hazardous waste from any of the designated streams, following the roasting furnace, and/or jaw crusher is placed in the rod mill by hand scooping and sealed The mill rotates grinding the material to a fine powder The mill is emptied into a drum by hand scooping.

PROCESS CAPACITY:
30 pounds/batch
1 – 2 hrs/batch
3 hrs/d, 5 d/wk, 52 wks/yr (average)

10 hrs/d, 5d/wk, 52 wks/yr (maximum)
Loading 10 minutes
Unloading 10 minutes
Maximum capacity per month, approximately, 7000 pounds

Unit #9 ROD-MILL (D011, 171, 172, 591, D008)
This unit is located in the powder processing area. Hazardous waste from any of the designated streams, following the roasting furnace, and/or jaw crusher is placed in the rod mill by hand scooping and sealed. The mill rotates grinding the material to a fine powder. The mill is emptied into a drum by hand scooping

PROCESS CAPACITY:
30 pound/batch
1 – 2 hrs/batch
3 hrs/d, 5 d, wk, 52 wks/yr (average)
10 hrs/d, 5 d/wk, 52 wks/yr (maximum)
Loading – 10 minutes
Unloading 10-minutes
Maximum capacity per month, approximately, 7000 pounds

Unit #12 BALL MILL (D011, 171, 172, 591, D008)
This unit is located in the powder processing area. Hazardous waste from any of the designated streams either as received, following the roaster furnace or jaw crusher is placed in the ball mill by shoveling and sealed. The mill rotates causing steel balls to grind the material to a fine powder. The mill is emptied to a tray by hand scooping/shoveling

PROCESS CAPACITY:
400 pounds/batch
3 – 6 hrs/batch
3 hrs/d, 5 d, wk, 52 wks/yr (average)
10 hrs d, 5 d/wk, 52 wks/yr (maximum)
Loading 10 minutes
Unloading 10 minutes
Maximum capacity per month, approximately 124500 00 pounds

Unit #13 JAW CRUSHER (D011, 172, D008, 591)
This unit is located in the powder processing area. Hazardous waste from any of the designated streams, following the roaster furnace or as received is poured down the throat of the jaw crusher by hand scooping/shoveling. The crushed particles fall into a sealed tray

PROCESS CAPACITY:

500 pound/batch
3– 6 hrs/batch
0 hrs/d, 0 d/wk, 5 wks /yr (average)
10 hrs/d, 4 d/wk, 50 wks/yr (maximum)
Loading – 10 minutes
Unloading 10 minutes
Maximum capacity per month, approximately 18000 pounds.

Unit #14 ROASTER FURNACE (D011, 172, 171, 591, D008)
This unit is located in the melt room. Hazardous waste from any of the designated streams is placed into trays by hand scooping/shoveling. The trays are placed into the roaster furnace and burned at approximately 900 – 1100 F. The trays then are placed in the cooling box and cooled, and then the material is either processed in the powder processing section (grinding or screening) or is stored in a drum.

OPERATING CAPACITY:
200 pounds/batch
2 hrs/batch
3 hrs /d, 4 d/wk, 50 wks/yr (average)
10 hrs/d, 4 d/wk, 50 wks/yr (maximum)
Loading – 15 minutes
Unloading – 15 minutes
Maximum capacity per month, approximately 18000 pounds.

Unit # 15 INDUCTION FURNACE (D011, 171, 172, D008, 591)
This unit is located in the melt room. Hazardous waste from any of the designated waste streams is placed in a crucible in the furnace. The material is brought up to between 1900 degree F and 2300 degree F. All of the material is poured out of the crucible into molds. One or more chemical (boric acid, soda ash, sodium nitrate) are added based on the type and quantity of the material charged to the furnace. The slag generated from this operation, is put into a D.O.T. approved 55-gallon metal drum for storage and additional processing at a later date. After the mold cools, the bars are removed from the molds by hand.

PROCESS CAPACITY:
200 T.O /batch
6 hrs /d, 4d/wk, 50 wks/yr (average)
10 hrs/d, 4 d/wk, 50 wks/yr (maximum)
15 minutes/batch
Loading – 10 minutes
Unloading – 10 minutes
Maximum capacity per month, approximately 18000 Troy Ounces

Unit # 16 INDUCTION FURNACE (D011, 171, 172, 591, D008)

This unit is located in the melt room. Hazardous waste from any of the designated waste streams is placed in a crucible in the furnace. The material is brought up to between 1900 degree F and 2300 degree F. All of the material is poured out of the crucible into molds. One or more chemical (boric acid, soda ash, sodium nitrate) are added based on the type and quantity of the material charged to the furnace. The slag generated from this operation, is put into a D.O.T. approved 55-gallon metal drum for storage and additional processing at a later date. After the mold cools, the bars are removed from the molds by hand.

PROCESS CAPACITY:
200 T.O./batch
15 minutes/batch
10 hrs/d, 4d/wk, 50 wks/yr (average)
10 hrs/d, 4 d/wk, 50 wks/yr (maximum)
Loading 10 minute
Unloading 10 minutes
Maximum capacity per month, approximately 18000 Troy Ounces

Unit # 17 INDUCTION FURNACE (D011, 171, 172, D008, 591)
This unit is located in the melt room. Hazardous waste from any of the designated waste streams is placed in a crucible in the furnace. The material is brought up to between 1900 degree F and 2300 degree F. All of the material is poured out of the crucible into molds or into water to form small beads. If poured into a mold, the bars are removed from the molds by hand after they cool.

PROCESS CAPACITY:
500 T.O. /batch
15 minutes/batch
0 hr/d, 0d/wk, 0wk/yr (average)
1 hr/d, 2d/wk, 50wks/yr (maximum)
Loading 10 minutes
Unloading 10 minutes
Maximum capacity per month, approximately 10000 pounds.

Unit # 18 INDUCTION FURNACE (D011, 171, 172, D008, 591)
This unit is located in the melt room. Hazardous waste from any of the designated waste streams is placed in a crucible in the furnace. The material is brought up to between 1900 degree F and 2300 degree F. All of the material is poured out of the crucible into molds. One or more chemical (boric acid, soda ash, sodium nitrate) are added based on the type and quantity of the material charged to the furnace. The slag generated from this operation, is put into a D.O.T. approved 55-gallon metal drum for storage and additional processing at a later date. After the mold cools, the bars are removed from the molds by hand.

PROCESS CAPACITY:
160 pounds /batch

30 minutes /batch
4 hrs/d, 4-d/ wk, 50 wk/yr (average)
10 hrs/d, 4d/wk, 50 wks/yr (maximum)
Loading 10-minutes
Unloading 10-minutes
Maximum capacity per month, approximately 30000 pounds

Unit # 18A INDUCTION FURNACE (D011, 171, 172, D008, 591)
This unit is located in the melt room. Hazardous waste from any of the designated waste streams is placed in a crucible in the furnace. The material is brought up to between 1900 degree F and 2300 degree F. All of the material is poured out of the crucible into molds One or more chemical (boric acid, soda ash, sodium nitrate) are added based on the type and quantity of the material charged to the furnace The slag generated from this operation, is put into a D.O.T approved 55-gallon metal drum for storage and additional processing at a later date. After the mold cools, the bars are removed from the molds by hand

PROCESS CAPACITY:
450 pounds /batch
30 minutes/batch
4 hrs/d, 4d/wk, 50 wks/yr (average)
10 hrs/d, 4d/wk, 50 wks/yr (maximum)
Loading 10 --minutes
Unloading- 10 minutes
Maximum capacity per month, approximately 30000 pounds

Unit # 19 NATURAL GAS FURNACE (D011, 171, 172, D008, 591)
This unit is located in the melt room. Hazardous waste from any of the designated waste streams is placed in a crucible in the furnace. The material is brought up to between 1900 degree F and 2300 degree F All of the material is poured out of the crucible into molds One or more chemical (boric acid, soda ash, borax, sodium nitrate) are added based on the type and quantity of the material charged to the furnace The slag generated from this operation, is put into a D.O.T approved 55-gallon metal drum for storage and additional processing at a later date. After the mold cools, the bars are removed from the molds by hand

PROCESS CAPACITY:
300 T O /batch
1 0 Hr/batch
0 hr/d, 0 d/wk, 0 wk/yr (average)
10 hrs/d, 2d/wk, 50 wk/yr (maximum)
Loading 10 minutes
Unloading 10 minutes
Maximum capacity per month, approximately 14000 pounds

Unit # 20 NATURAL GAS FURNACE (D011, 171, 172, D008, 591)
This unit is located in the melt room Hazardous waste from any of the designated waste streams is placed in a crucible in the furnace The material is brought up to between 1900 degree F and 2300 degree F All of the material is poured out of the crucible into molds One or more chemical (boric acid, soda ash, borax, sodium nitrate) are added based on the type and quantity of the material charged to the furnace. The slag generated from this operation, is put into a D O T. approved 55-gallon metal drum for storage and additional processing at a later date After the mold cools, the bars are removed from the molds by hand

PROCESS CAPACITY:
300 Troy Ounces
1 0 hr/batch
4 hrs/d, 4d/wk, 50 wks/yr (average)
10 hrs/d, 4d/wk, 50 wks/yr (maximum)
Loading 15 minutes
Unloading 15 minutes
Maximum capacity per month, approximately 6000 pounds.

Unit # 21 NATURAL GAS FURNACE (D011, 171, 172, D008, 591)
This unit is located in the melt room Hazardous waste from any of the designated waste streams is placed in a crucible in the furnace. The material is brought up to between 1900 degree F and 2300 degree F All of the material is poured out of the crucible into molds One or more chemical (boric acid, soda ash, borax, sodium nitrate) are added based on the type and quantity of the material charged to the furnace The slag generated from this operation, is put into a D O T approved 55-gallon metal drum for storage and additional processing at a later date. After the mold cools, the bars are removed from the molds by hand.

PROCESS CAPACITY:
25-450 pounds/batch
3.0 hrs/batch
0 hr/d, 0 d/wk, 0 wk/yr (average)
5 hrs/d, 3 d/wk, 50 wks/yr
Loading 15 minutes
Unloading 15 minutes
Maximum capacity per month, approximately, 4000 pounds

Unit # 22 NATURAL GAS FURNACE (D011, 171, 172, D008, 591)
This unit is located in the melt room. Hazardous waste from any of the designated waste streams is placed in a crucible in the furnace. The material is brought up to between 1900 degree F and 2300 degree F. All of the material is poured out of the crucible into molds. One or more chemical (boric acid, soda ash, borax, sodium nitrate) are added based on the type and quantity of the material charged to the furnace. The slag generated from this operation, is put into a D.O.T. approved 55-gallon metal drum for storage and additional processing at a later date. After the mold cools, the bars are removed from the molds by hand.

PROCESS CAPACITY:
250 – 1500 pound/batch
3.0 hrs/batch
0 hr/d, 0 d/wk, 0 wk/yr (average)
10 hrs/d, 3 d/wk, 50 wk/yr (maximum)
Loading 30 minutes
Unloading 30 minutes
Maximum capacity per month, approximately 100000 pounds

Unit # 23 NATURAL GAS FURNACE (D011, 171, 172, D008, 591)
This unit is located in the melt room. Hazardous waste from any of the designated waste streams is placed in a crucible in the furnace. The material is brought up to between 1900 degree F and 2300 degree F. All of the material is poured out of the crucible into molds. One or more chemical (boric acid, soda ash, borax, sodium nitrate) are added based on the type and quantity of the material charged to the furnace. The slag generated from this operation, is put into a D.O.T. approved 55-gallon metal drum for storage and additional processing at a later date. After the mold cools, the bars are removed from the molds by hand.

PROCESS CAPACITY:
250-1500 pounds/batch
3.0 hrs/batch
0 hr/d, 0 d/wk, 0 wk/yr (average)
10 hrs/d, 3 d/wk, 50 wk/yr (maximum)
Loading 30 minutes
Unloading 30 minutes
Maximum capacity per month, approximately 100000 pounds

TWO IDENTICAL BAGHOUSES FOR EMISSION CONTROL - (#1 and #2),
These units, located in the backyard of the facility (north side), capture all the emissions (metal dust, particulates) generated, due to the activities of the melting and powder processing operations (waste code D008, D011, 172, 591). Each unit contains 210 bags to

capture the emissions from the processes When the bags are saturated with contaminants, they are removed by hand and burned at the Roaster Furnace # 14, to recover any existing precious metals, including silver. Both units are under permit from South Coast Air Quality Management District (SCAQMD) The bags will prevent any contaminants from being emitted to the environment. (D008, D011, 172, 591)

EVAPORATOR: (waste code D008, D011, 171, 491).
The evaporator, located in the backyard of the facility (north side), evaporates cooling water, and wash water generated in the facility due to washing metal parts This unit has the capacity of 250 gallons. To prevent foaming in this unit, chemical anti-foam is used when needed The sludge accumulated in this unit is transferred to the roaster furnace, dried, burned to recover any precious metals, including silver. This evaporator has a secondary containment (tank) to prevent release of liquid hazardous waste to the environment.

PROCESS CAPACITY:
250 gallons capacity
continuous operation
10 hr/d, 5 d/wk, 50 wk/yr (average)
24 hrs/d, 3 d/wk, 50 wk/yr (maximum)
Maximum capacity per month, approximately 10000 pounds.

There is no piping connecting the hazardous waste management units at the facility, however, these units are connected to the baghouses with ducting system.

PROCESS DESCRIPTION OF EACH WASTE STREAM:

WASTE STREAM A, SWEEPS: First get stored in storage area S-3 and then is roasted in roaster furnace # 14. From there, the Sweeps are sent to the powder processing , (ball mill, Unit # 4) as needed and then Screen, Unit # 2. After that the material is processed in V-blender # 6, (mixed), and sampled. The sample will be analyzed by site laboratory for precious metals. (172, D011, D008, 591).

WASTE STREAM B, WASTE WATER: All cooling /washing water from the facility is processed in the evaporator, the remaining sludge is removed and stored in a appropriate container, labeled and sent to the Roaster furnace # 14 as needed for drying, burning. After that the recovered precious metals in the form of powder, is sent to, powder processing section (grind, screen, blend, sample). (D011, 491).

WASTE STREAM C, BAGHOUSES WASTE: The baghouse waste is stored in 55-gallon metal drum. It is then sent to the powder processing Area of the facility as needed and mixed with other precious metals bearing metal dust and processed slag, as needed and exported. (D011, 591, D008, 172). (ducts from gas furnaces # 14, #15, #16, #17, #18, #18A, # 19, # 20, # 21, # 22, # 23).

WASTE STREAM D, SPENT ACID (Mixed): This waste which is generated as a result of laboratory activities at the site is disposed by an California approved disposal company under a Manifest. (D011, D002, 792), as needed.

WASTE STREAM E, CUPELS: This waste which is generated as a result of activities at the site laboratory is disposed by an California approved disposal company under a Manifest. (D008, 181), as needed.

WASTE STREAM F, CRUCIBLE: This waste which is generated as a result of activities at the site laboratory is disposed by an California approved disposal company under a Manifest. (D008, 181), as needed.

WASTE STREAM G, SINK SLUDGE : This waste is dried in the Roaster furnace # 14, as needed, and sent to the powder processing Area (grind, screen, blend, sample). (D011, 171)

WASTE STREAM H, Filters: This waste is dried in the Roaster furnace #14 as needed and sent to the powder processing area (grind, screen, blend, sample). (D011, 172)

WASTE STREAM I, Slag: This waste is generated as a result of melting activities in the melting area of the facility. The slag is stored in the 55-gallon metal drums as needed and sent to the powder processing (grind, screen, blend, sample). (D011, 172, D008)

WASTE STREAM J, SILVER CHIP: This waste is melted in any one of the furnaces # 15 thru #23, depending on the size of the lot. The material is converted to a metal bar due to the melting, as needed, and stored in a 55-gallon metal drum. (D011, 172) for storage.

SECTION VI TRAINING PLAN (attachment AA-3)

A. TRAINING

The personnel training requirements for hazardous waste management facilities are cited in CCR, title 22, Section 66264.16. The purpose of these requirements is to ensure that DHF personnel have adequate training to perform their duties safely and in compliance with regulatory standards.

1. DHF has developed a training program for all facility personnel involved in the management of hazardous waste or the supervision of these activities. The program is relevant to the job responsibilities and activities conducted at the facility
2. All personnel associated with the management of hazardous wastes are required to successfully complete a program of instruction that trains them to perform their duties safely and in compliance with regulatory requirements.
3. A written training plan is developed and is maintained in the office of the Health, Safety and Environmental Manager
4. Training records are maintained at the facility for all current and former personnel. Records are kept for at least 3 years after the last date of employment. In addition to the requirements in Section 66264.16, Title 22, CCR, the training program also addresses the Cal-OSHA worker training requirements identified in CCR, title 8, section 5192.

B. TRAINING PROGRAM

1. The training program for DHF consists of an introductory training program and a continuing training program, or annual review. The training program is specific to positions at the facility. The program ensures that employees have or will have acquired the necessary training and management skills to perform their jobs in a competent manner that will protect human health and the environment.
2. The introductory training program shall be completed by each DHF employee within the first six months of employment or six months after a change of position. Until the employee has completed this training, he/she may not work in an unsupervised position. The introductory training addresses the following topics:
   - a. Hazardous waste Management Procedures - This is designed to be relevant to the position in which the individual is employed.
   - b. Contingency Plan Implementation - The plan is designed to ensure that DHF personnel are able to respond effectively to emergencies and become familiar with emergency equipment and emergency systems. This includes the following, when it is applicable:
     - i. Use, inspection, repair, and replacement of facility emergency and monitoring equipment
     - ii. Communication or alarm systems
     - iii Response to fire or explosion
     - iv Shutdown of operations

3. Each employee must participate annually in an update, or refresher, of the initial training. The refresher should keep personnel of DHF up to date with changes at the facility, such as the characteristics of new wastes managed at the facility or the contingency plan, as well as changes in the rapidly evolving field of hazardous waste management.
   a. The training program will consist of classroom or on-the-job training
   b. A person trained in hazardous waste management procedures must direct the training program
   c. Cal-OSHA also requires that all employees of hazardous waste facilities regulated under Chapter 6 5, Health and Safety Code obtain an initial health and safety training of 24 hours and refresher training for (8) hours annually.

C. TRAINING RECORDS

Personnel training records are kept at DHF facility for examination by a DTSC inspector upon request. The training records for current personnel are kept on file at the facility until DHF closes. The training records of former employees will be available for at least 3 years from their last date of employment at the facility. If an employee is transferred within DHF, their training records remain the same

Training records must include: a job title for each position at the facility that is related to hazardous waste management, a job description for each of those positions, and the names of the employee filling those positions. The job description, for each position, must include the skill, education, or other qualifications needed by employees to fill each position, and the duties of employees assigned to each position. The DHF records must demonstrate that personnel have completed the proper training. DHF must retain a record of the dates on which employees received their training and annual reviews. (attachment AA-3). DHFCO keeps an on-site record of job titles and the training necessary for that job title. It is located in the Office of Health, Safety and Environmental Manager

SECTION VII INSPECTION PLAN (attachment AA-6)

DHF will inspect the facility for malfunction and deteriorations, operator errors, and release to secondary containment or the environment which may cause or may lead to the release of hazardous waste constituents to the environment or threaten human health. DHF will record all findings in an inspection log. This log is kept in the Office of the Health, Safety and Environmental Affairs Manager. If a problem is detected, DHF will take necessary steps immediately to correct the situation. DHF shall inspect all monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment. Any time any defective item is found, DHF removes that item from the operations, and it will be repaired as is applicable. (attachment AA-6)

FREQUENCY OF INSPECTION BY DHF PERSONNEL:

A DAILY INSPECTIONS: (all emergency equipment)

Maximum of drums together in storage area
30-Inches space in the aisle between the rows of drums
Warning signs
Doorways
Forklift
Loading/unloading zone
Processing equipment
Baghouses-all equipment
Eye washes/showers
Fire extinguishers

B. WEEKLY INSPECTION:

Furnaces
Secondary containment
Aisle space
Accumulation dates
Drum tops free of spills/leakage
Drum labels
Incompatible wastes not together
Respirators, cartridges, protective clothing, forklifts and warning signs.
Furnaces, powder processing units

C. MONTHLY INSPECTIONS:

Emergency Showers/Eyewash
Face shield
Protective glasses
Disposable respirator (dust mask)
First aid/equipment supplies
Protective clothing
5-minute air pack
Decontamination equipment

Warning signs
Fire detection system
Loading areas
Unloading areas
Storage areas
Main roadways
Gate area
Periphery
Emergency lights

SECTION VIII CONTINGENY PLAN

A CONTINGENCY PLAN/EMERGENCY PREPAREDNESS

1 EMERGENCY PREPAREDNESS AND PREVENTION

David H Fell &Co Inc , has prepared the Contingency Plan in an attempt to minimize hazards to human Health or the environment from emergency situations. The provisions of this plan will be carried out immediately whenever there is an emergency that could threaten human health or the environment The requirements of Article 3 of Chapter 14, Title 22, CFR (Sections 66264.30 et esq) are used to produce this plan. This plan identifies facility requirements that are intended to minimize the possibility of a fire, explosion, or any release of hazardous waste to the environment

The following equipment is present in the DHF facility in order to adequately respond to an emergency situation.

2 REQUIRED EQUIPMENT

a Internal communication (PA system), which is immediately accessible, to all personnel involved in the handling of hazardous waste

b Telephone system capable of summoning emergency assistance from local police, Los Angeles Fire Department, or any other emergency response team is also available to any employee alone while the facility is in operation (DHF also can use CHEMTREC EMERGENCY RESPONSE TEAM at 800-424-9300)

c Several Portable Fire extinguishers and other fire control equipment are available on site

d. Spill control – several containers of sawdust and dry chemicals/sand are stored at the different parts of the facility for emergency uses.

e. Decontamination equipment- protective apron, protective gloves, safety eye glasses, boots, boots cover, soda ash, other chemicals including soap, various commercial cleaning agents are available for decontamination purposes

f. Water supply systems, including automatic sprinkler and hoses are available at the site Personnel at the site, frequently inspect these systems to assure proper operation in the event of an emergency

3 ARRANGEMENT WITH LOCAL SERVICES AND AUTHORITIES

DHF has a contract with CHEMTREC to respond in case of hazardous waste spills at the facility or any other locations (800-424-9300)

4 WHAT IS A CONTIGENCY PLAN AND WHY IT IS NEEDED

David H. Fell & Co., Inc., has prepared the Contingency Plan, to minimize hazards to human health or the environment from emergency situations

The provisions of this plan will be carried out immediately whenever there is an emergency that could threaten human health or the environment This plan provides a structural list of procedures that allow DHF to respond immediately and appropriately to incidents such as fires, explosions and unplanned release, or spills of hazardous wastes or hazardous waste constituents to the air, soil or surface water. This process minimizes the hazards to human health and the environment that may occur as a result of emergencies involving hazardous wastes The DHF Contingency Plan is based on the requirements of the regulations that specify in the California Code of Regulations (CCR), Title 22, Chapter 14, Article 4, and beginning with 66264.50. DHF provides one copy of the plan, and any revisions to each of the agencies that may provide emergency response, including local police departments, fire departments, hospitals, and local and State emergency response teams. The plan is revised by DHF or its consultant (CDMS), whenever the plan fails during an emergency, the facility changes, the contents of the plan change, or the regulation change.

5 WHAT IS INCLUDED IN THE DHF CONTINGENCY PLAN
DHF plan's provisions include:

a Emergency Coordinator: Max Rafii (Primary emergency coordinator), Larry Fell, Elbert Sanchez are designated Emergency Coordinators in this plan. All three emergency coordinators are familiar with all aspects of the facility's operation, its activities, its layout, its contingency plan, the location and characteristics of hazardous wastes managed at the DHF facility, and the location of records The Emergency Coordinators at DHF facility have the authority to implement the contingency plan, including the authority to commit the necessary resources to accomplish the provisions of the plan

b EMERGENCY PROCEDURES: The DHF Contingency Plan describes the specific procedures that the facility will follow if an emergency occurs If there is an imminent or actual emergency, the emergency coordinators will notify facility personnel, by activating communication systems and notify the appropriate local and State agencies with emergency response roles.

c. If there is a fire, explosion or release of hazardous waste or hazardous waste constituents, the emergency coordinators at DHF will immediately determine the character, source, amount and real extent of the release, using observation, facility records and manifests. Chemical analysis will be used if necessary to characterize the release. In this situation DHF emergency coordinators will evaluate the possible hazardous impact of the

release, fire or explosion on human health and the environment, considering both direct (such as the effect of any toxic or irritating gases that may be generated) and indirect effect (such as the effect of any surface water run-off generated by water or chemical agents to control fire) If DHF, emergency coordinators determin that the fire, explosion or release could threaten human health or the environment outside the facility, the coordinators will immediately notify the appropriate local authorities, if surrounding areas require evacuation In all cases, the Emergency coordinator must also notify the State Office of Emergency Services (OES) The report to OES must include the name and phone number of the person making the report, the name and quantities of materials involved, the extent of any injuries and the possible hazards to human health and the environment outside of the facility

d During an emergency, the emergency coordinators at DHF will take reasonable measures to ensure that fires, explosions or releases do not occur, recur or spread to other hazardous waste at the facility When necessary, the coordinators will stop processes and operations, and, if it is safe to do so, collect and contain released waste and remove or isolate containers If the facility operations are stopped, the emergency coordinators will, whenever appropriate and when conditions are safe, monitor the facility equipment for leaks, pressure buildup, gas generation, or ruptures in valves, pipes or other equipment

e Immediately after any emergency, the emergency coordinators at DHF will make arrangements for treating, storing and/or disposing of recovered waste, contaminated soil or surface water, or any other material resulting from the incident DHF will comply with all applicable generator requirements The emergency coordinator will ensure that until the released material is completely cleaned up, no waste that may be incompatible with the released material may be transferred, treated, stored or disposed of in the affected areas In addition the emergency coordinators will ensure that all emergency equipment listed in the contingency plan is clean and fit for its intended use before facility operations resume In order to resume operations in the affected areas, the owner/operator of DHF, will notify DTSC and other appropriate state and local authorities that no incompatible wastes are in contact with the affected areas and all emergency equipment listed in the contingency plan is ready for use

f Any time that the contingency plan is used, the owner/operator of the site will note in its operating record the time, date and details of the incident The owner/operator will also submit a report to

DTSC within 15 days after the incident including the name, address and telephone number of the owner/operator, the date, time, and type of incident; the name and quantity of materials involved, the extent of any injuries, an assessment of any actual or potential hazards to human health or the environment, and the estimated quantity and disposition of recovered material that resulted from the incident

g EMERGENCY SERVICES: The plan describes arrangements made with local police departments, fire departments, hospitals, contractors and local and state emergency response teams to provide emergency services. This element is intended to familiarize local fire, police and emergency response teams with the facility layout, the properties of the hazardous waste handled at the facility, locations where facility employees typically work, entrances to the facility and possible evacuation routes. This provision also familiarizes local hospitals with the properties of the hazardous wastes managed at the facility and the types of injuries or illnesses that could result from emergencies. Finally, this element describes the agreements made with State emergency response teams, emergency response contractors and equipment suppliers. This element also describes the local agency with primary emergency authority and local agencies providing supporting emergency response in those instances where more than one fire or police department may respond

h DHF ensures that, any arrangement made for emergency services must be appropriate for the type of hazardous waste managed at the facility and the potential need for the emergency services provided by these agencies

i. Emergency Equipment: The DHF plan includes a current listing, kept up-to-date, of the emergency equipment at the site.

j Evacuation Plan: If there is a possibility for evacuation due to an emergency, the plan provides locations for evacuation,

k. OES Contact: The DHF Plan includes telephone number for the State Office of Emergency Services so that the emergency coordinators may report to OES, as described in the emergency procedures.

SECTION IX CLOSURE PLAN

This Closure Plan is produced for DHF. It is a process where all of the facility's hazardous waste is removed and the facility is decontaminated:

A INTRODUCTION

DHF site is located at 6009 Bandini Blvd., City of Bell, California, in Los Angeles County.

DHF receives hazardous waste containing silver and precious metals from known offsite generators to the facility under manifest or under bill of lading when qualifying under small quantity exemption. The waste is analyzed in the DHF laboratory to determine its precious metal content. The incoming waste is processed to maximize the reclamation of precious metals in the physical form requested by customers. The DHF treatment and storage units are located in an enclosed building as shown in the facility plot plan. (Attachment AA-4) The treatment room located on the west side of DHF, is divided into melting room on the north end and powder processing on the south end identified on the facility plot plan. The melting room, where the refining and smelting process are conducted, contains gas furnaces, and induction furnaces. The furnaces produce precious metal ingot and slag. Gases and particulates from the furnaces are ducted to two Air Pollution Control Units (Baghouses), located outside of the facility in the backyard. In the powder processing room, the incoming waste and slag from furnaces are processed through mechanical size reduction equipment, An Evaporator unit located outside the facility, evaporates hazardous waste (wash water), generated in the melting and fabrication rooms, returns the solid waste left in the evaporator to the treatment process. Solid waste and liquid waste storage units are located in the facility to facilitate treatment processes.

In order to complete closure:

1. All hazardous waste on site must be removed
   - a. Received from off site sources
   - b. Generated on site
   - c. Generated during clean up
   - d. A team of minimum of 2 people will conduct the closing.
2. The facility must be decontaminated
   - a. Process tanks and containers
   - b. Walls and floors
   - c. Storage containers
   - d. Material handling equipment
3. Sampling must be done to confirm clean up
   - a. Wipe sampling
   - b. Chip sampling
   - c. Soil sampling

4 Analysis of samples must conform to Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, and SW-846, 3rd Edition and Title 22, CCR, Section 66261 126 Appendix III

5 Closure Certification as follows must be obtained

a Certified by independent professional Engineer
b Supervisory personnel description
c Summary of closure activities
d Field Engineers observation and report discussion on analytical results
e Sampling data and analysis
f Discussion on analytical results
g Manifests
h Modification and amendments to closure plan
i Photographs

6 After closure of the facility, the equipment and tanks will be decontaminated, and sold, either as is or as scrap. DHF expects to complete the closure activities in a one-week period from the starting date, as follows Equipment and tanks that do not qualify for scrap metal will have to be disposed of at a hazardous waste facility

CLOSURE SCHEDULE:

All equipment and tanks will be decontaminated at the site (2 days)
The walls of the facility will be cleaned and rinsed (2 days)
Paper work and sampling (1 day)
Disposal of remaining hazardous waste (1 day)
Certification of the Site (1 day)

In order to complete this plan, a closure cost estimate must be made. (see attachment AA-2)

B MAXIMUM INVENTORY ESTIMATES (attachment AA-2)

1 Estimates of maximum waste in containers from off site sources:

a	Rinsate from Decontamination	550 gallons
b	Sweeps, slag, sludge	181 drums
c	Waste Acid	2 drums
d	Cupels/Crucibles	6 drums
e	Solid Waste from Decontamination	2 drums
f	Liquid Hazardous Waste	2 drums

C SOIL SAMPLING PLAN: (S-6, S-9, evaporator):

At these locations, a soil sample will be taken at the surface and analyzed for hazardous components (lead, copper). The samples will be analyzed by Caltech Environmental Services of Pomona. If the results indicated contaminations (above the threshold , per requirements of title 22, CCR), additional samples will be taken at 6 ft. for analysis (the same Methods). Based on the result of this analysis, further samples will be taken. The procedure and Methods of testing will be based on the EPA Method SW-846

NOTE: DHF is only testing the soil samples in these areas for lead, copper, zinc, nickel and silver, because these elements are the primary contaminants present in the liquid acid waste and sludge, which are stored at S-6 and S-9 Storage Areas.

(S-6): Acid waste is stored in this hazardous waste Storage Are, which is a contained Area.

(S-9): The Jewelry sludge containing precious metals, is stored in this Area. This Area is contained with a containment made of plastic. During the closure activities the soil sample will be taken from this Area, (See facility Plot Plan for the location of the soil sample).

Evaporator: The soil under the evaporator will be tested for lead, zinc, copper, silver, and nickel

All other Hazardous Waste Storage Areas in the facility are for the storage of solid Hazardous waste

Chip samples will be taken from the Processing Area as well.

D ANALYTICAL TEST METHODS

All laboratory analyses shall be performed at a California Certified Analytical Laboratory. All analytical methods used for closure must be from methods found in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition and Title 22, CCR Regulation, Section 66261.126, Appendix III.

E CLOSURE PERFORMANCE STANDARD- (Background)
A hypothetical date of closure: March 2030. DHF will perform sampling and analysis to show that closure performance standards have been met, (Background). If closure performance standards based on Background, cannot be met, DHF may submit a health risk assessment that will provide levels that do not pose a substantial present or potential threat to human health and the environment

The background soil samples will be taken from an area unaffected by the facility's operations

Prior to closing the facility, DHF will provide Department of Toxic Substances Control (DTSC) with Background Soil sample Results, for the chemicals of concern

F WASTE REMOVAL/TREATMENT

When the facility will be closing and will no longer be used to manage hazardous wastes, the final batch of waste will be removed from the facility by the personnel of DHF. Please note that steps 1-3 will be taken for waste removal

1 Processing the waste through the facility's process
2 Taking the waste off-site to a California Approved treatment facility
3. Taking the waste off-site to a disposal facility

All hazardous waste generated at the site which cannot be further processed at the site, will be shipped to Industrial Waste Utilization Inc , (IWU) located on 5601 State Street, Montclair, CA 91763, which will take the waste to American Ecology Corporation located 11 miles south on Highway 95, Beatty, Nevada, 89003 for disposal.
All equipment and treatment units, including Coolant 7A, 7B, after decontamination will be sold as scrap metal All scrap metals will be cleaned until the hazardous waste cannot be visually seen

G DECONTAMINATION PROCEDURE

DHF will decontaminate the following: (See attachment AA-4, scaled facility plot plan)

1. All floors and walls of the buildings in the powder processing and melt room areas.
2 All hazardous waste storage areas (S-1 Thru S-9)
3. The Evaporator Tank
4 All Inductions and Gas furnaces (Equipment numbers 14 Through 23)
5 All powder processing equipment (Numbers 1 Thru 13)
6. Bags of the both baghouses will be removed and burned/ processed a designated facility
7. Both forklifts
8. Scales
9. Working benches
10 All other hazardous waste treatment units
11 Pipes, pumps, valves, hoses, loading/unloading pads, dollies, pallets, shovels, scoops

METHODS AND PROCEDURES FOR DECONTAMINATIONS:

All hazardous waste management units, (tanks, vats, pumps, filters) will be wiped down All the rinsate will be sampled separately and analyzed for metals (zinc, copper, silver, lead, nickel) by the personnel of a California Approved Laboratory. The personnel of the Laboratory, which will conduct the analysis of the samples from the closure activities, will ensure that the appropriate methods of the analysis are used per requirements of EPA methods as well as CCR 22 methods It is estimated that, as a result of decontamination, DHF will accumulate approximately accumulate approximately 10 drums of wash rinsate, which will be processed in the evaporator located on the site The personnel of DHF, who are trained in the closure activities will decontaminates all storage areas (S-1 thru S-9), by sweeping, scrubbing, and mopping

Pipes and associated piping equipment will be dismantled and shipped off site as hazardous waste. Forklift will be pressure washed Regulated treatment units will be wiped down and then sent to scrap metal. The walls will be vacuumed with an Air Resources Board approved filter The storage and processing areas will be swept, scrubbed, and mopped All decontamination equipment including shovels, mops, and scrubbers and PPE will be disposed of at hazardous waste disposal facility. The floors of both baghouses will be swept, scrubbed and mopped and the walls of the baghouse will be vacuumed Baghouse associated equipment will be vacuumed or wiped down The baghouse and associated equipment will be disassembled and sent to a scrap metal recycler.

H CONFIRMATION SAMPLING FOR STRUCTURES, EQUIPMENT, AND BUILDINGS.

Appropriate numbers of the samples will be taken to demonstrate that the performance standards have been met These samples will be used to verify that decontamination have been effective or to demonstrate that no contamination has ever taken place at DHF facility. Sampling should be conducted only after a through visual inspection and proper decontamination has been performed. The following samples will be taken from:

1. S-6, S-9 and the Evaporator area
2. Rinsate
3 2 Fork lifts

SOIL SAMPLING LOCATIONS:

The soil sampling locations are S-6 and S-9 Storage Areas (liquid waste), and the evaporator area as is designated on the facility Plot Plan At each location samples will be taken minimally at the surface, 3 ft and 6 ft below ground surface (bgs) Soil samples will be taken by Caltech Environmental Laboratories, Inc of Panaroma City, California, a California Approved Testing Laboratory The laboratory will analyze the soil samples for silver, copper, zinc, nickel, lead, per EPA Method SW-846 Based on the results of these analyses, additional soil

samples will be taken, from the areas, if elevated levels of contaminants are indicated.

There are three sampling methods that DHF can use for the closure of treatment and storage facilities. They are as follows

1. Wipe Sampling- This method is used for sampling smooth, impervious and solid surfaces as metal tanks; epoxy coated concrete, vinyl liner, etc. Four wipe sample, at a minimum, should be taken from each tank. One wipe sample will be taken regardless of tank size. These samples will be taken from the Evaporator tank, and all other Hazardous Waste Management Units (HWMU) described in the facility plot plan. Typical wipe sample area is 1 square foot. The samples should be taken using filter paper or gauze pad moistened with a solvent that will remove the contaminant from the surface.

2. Chip Sampling- This method is used for sampling porous surfaces such as asphalt, concrete and wood. In this method, the surface of the material is chipped out using tools such as chisel or an electric hammer. The chip sample should have a size approximately 10 cm in area and 3 millimeters in depth.

3. Cleaning Solution Sampling - This method is used for sampling items such as pumps, pipes, filters and equipment. This method is used for sampling parts that are physically difficult to get to or too small to sample individually.

One chip sample will be taken from S-3, S-6 and the evaporator and sent to the laboratory for analysis for lead, silver, copper, zinc, nickel.

All rinsate for the entire facility will be bulked. One rinsate same will be taken will be analyzed for lead, silver, copper, zinc and nickel.

1 wipe sample will be taken from each of two forklifts.
1 soil sample from S-6, S-9 and the evaporator will be taken and analyzed for zinc, copper, lead, nickel and silver. Samples will be taken at the surface, 3 ft and 6ft.

10% of each type of sample, (chip, wipe, rinsate, soil) will re-analyzed for quality assurance (QA) and quality control (QC). (See Table VI)

TABLE VI CONFIRMATION, RINSATE & Q/C SAMPLES

Unit	# of Samples	# of Analyses w/ QA
S-6 - Concrete Sample	1	2
S-9 - Concrete Sample	1	2
Evaporator - Concrete Sample	1	2
S-6 – Soil Sample	1	4
S-9 Soil Sample	1	4
Evaporator – Soil Sample	1	4
Rinsate Sample	1	2
Fork Lift (2)	2	4

I. CLOSURE HEALTH AND SAFETY PLAN

At the time of closure, DHF must have a health and safety plan (H & S Plan) that will provide protection to personnel during the closure activities The H & S Plan must be reviewed and approved by a certified industrial hygienist.

The DHF Plan must address the following:

1. Hazard Identification – Identifies the hazards that will be present during closure (e g., confined spaces, heat stress, chemical hazards, heavy equipment use, etc.).

2. Hazard Evaluation – Evaluates the impact of closure on personnel or public health. The evaluation is usually accomplished by referring to the standard reference for data and guidelines on permissible levels of exposure

3. Personal Protection Equipment (PPE) – Lists the PPEs that will be used during the closure activities.

4 Environmental Monitoring – Monitoring of atmosphere and personnel to ensure a safe site environment.

5. Site Work Zones – Delineates zones or area at the facility where different types of closure activity will take place. The zones are defined to prevent the spread of hazardous waste.

6. Decontamination of Workers – Establishes the procedures for decontamination of closure personnel

J. CLOSURE SCHEDULE

When DHF decides to close the facility, the owner or operator shall notify DTSC their intent of closure at least 90 days prior to the beginning of the closure plan implementation. DTSC may require the owner or operator to amend the closure plan that time.

The closure plan implementation must comply with the following closure schedule:

1. Wastes must be removed and structures/equipment decontaminated within 90 days of the date that the facility stopped receiving hazardous waste or the closure plan was approved, whichever is later.

2. All closure activities must be completed within 180 days of the date that the facility stopped receiving hazardous waste or the closure plan was approved whichever is later

K. CLOSURE CERTIFICATION REPORT

After all closure activities have been completed, a closure certification must be submitted by DHF. The certification must be submitted to DTSC by registered mail within 60 days of completion of closure activity

The Closure Certification Report must include the following:

1. A certification by an independent professional engineer registered in California in accordance with Title 22, California Code of Regulations, Section 66270.11 (d)

2. Supervisory Personnel Description – Identify the person(s) or companies who were responsible for supervision of closure activities at the site, including transportation of waste and sample collection.

3. Summary of Closure Activities - The walls of the buildings, all treatment units, storage areas, evaporator, forklifts will be decontaminated per description mentioned above

4. Field Engineer Observation Report

5. Sampling Data Analysis – All sampling information such as sampling locations, chain of custody, analytical results will be included

6. Discussion of Analytical Results

7 Manifests – Copies of manifests showing the disposition of the waste inventory

8. Modification and Amendments to Closure Plan

9 Photographs

DHF facility also must keep and maintain the following documents at the facility until the closure certification is approval

1 Approved Closure Plan
2. Copies of the independent Professional Engineer's field observation reports
3 Laboratory results of samples analyzed
4. Quality assurance/quality control demonstrations
5 Manifests
6 Closure certification

SECTION X

CERTIFICATION (See Attachment AA-7)